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GR 97 P 8073 P

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Mail Stop: Reply Brief-Patents

BY: _____   Date: _December 30, 2003_

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
Before the Board of Patent Appeals and Interferences

Applic. No.:	09/494,780	Confirmation No: 3930
Applicant	:	Stefan Bahrenburg et al.
Filed	:	January 31, 2000
Title	:	Method and Radio Station for Data Transmission
Art Unit	:	2662
Examiner	:	John Pezzlo

Docket No. : GR 97 P 8073
Customer No.: 24131

R E P L Y   B R I E F

Hon. Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

S i r :

In response to the Examiner's Answer dated October 31, 2003,

kindly consider the following remarks:

-1-

Remarks/Arguments

Appellants maintain that the Sato reference does not disclose the claimed features of using one common training sequence for at least two of the data channels and distinguishing the data channels by an individual spreading code.

Appellants respectfully submit that Examiner's Response to Arguments contains several misstatements and erroneous conclusions as discussed below.

The Examiner is attempting to show that Sato, in Fig. 7 and col. 9, lines 18-34, discloses using the same training sequence for each time slot of a connection. However, Fig. 7 and the related description do not disclose a plurality of time slots; only a single time slot is disclosed. Fig. 7 clearly shows a single burst, which is transmitted within a time slot. One skilled in the art is readily aware that in each time slot, in a TDMA method, a burst from the transmitter to the receiver is transferred for each connection assigned to the time slot. This is apparent from col. 9, lines 19-23 of Sato. Sato discloses (see col. 9, lines 26-29) that the training signal series differentiates a plurality of channels within the same time slot ("a common time slot TM"). Thus, the channels use a common time slot. Sato only discloses that

the training sequence is used for differentiating a plurality
of channels within a "common time slot" from each other, which
is necessary because the training sequence is used to estimate
the transmission channel that must take place before
unspreading of the transmitted signals can occur by using the
connection-individual spread code). Sato does not disclose
that the same training sequence is used for two time slots of
the same connection.

Sato discloses (see col. 9, lines 29-34) how the necessary
number of different training sequences (which differentiate
different connections within the same time slot) can be
generated.

Regarding the claimed feature pertaining to individual
spreading code, the Examiner, in item 2 of Attachment #1 of
the Advisory Action of June 27, 2003, states that Sato's
summary of invention (see col. 2, lines 49-65) discloses
"…that the preselected spread code lasts for a time slot…".
From this the Examiner concludes that for the assignment of
more than one time protection of a frame for connection of a
mobile station for each time slot of the same connection, a
different spread code is used. Appellants respectfully submit

that the Examiner has incorrectly analyzed Sato and therefore, has arrived at the wrong conclusions.

Col. 2, lines 49-65 of Sato does not disclose that the spread code has a duration of a time slot, but rather that "a sequence of rate converted signals…lasts for a time slot" (see col. 2, lines 52-54) as well as "a sequence of spread signals which lasts for a time slot" (see col. 2, lines 62 et seq.). Sato's disclosure referred to by the Examiner only discloses that the unspread as well as the spread signals have the duration of a time slot. This occurs, however, because these signals in Sato must be transferred within a time slot. Sato does not disclose anything relating to the duration of the use of a spread code. It is well-established that each bit of the connection is spread with the spread code assigned to a connection.

Sato does not disclose that different spread codes are assigned for a mobile station for a plurality of time slots as recited in the claims. Instead, Sato discloses that the same spread code is used for each mobile station, even when a plurality of time slots are used per frame, as further discussed in Appellants Brief on Appeal.

Appellants also note the Examiner's statement that "each code for each time slot would be different, which is the method utilized by CDMA to maintain the multiple access between channels and time slots", which is incorrect or at least misleading. Instead, the use of different spread codes in CDMA differentiates a plurality of channels within <u>the same</u> time slot. Overlapping between the channels can only take place within the same time slot. The same spread codes, however, can be used again in each time slot, because the channels in different time slots are already different because of their time position (TDMA).
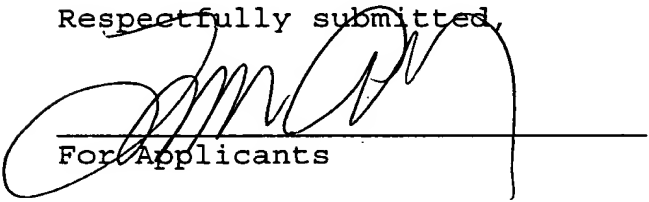
In summary, appellants submit that the Examiner's statements in the Response to Argument are based on incorrect interpretations of and/or incorrect assumptions with regard to Sato's disclosure. Appellants have accurately described Sato in their Brief on Appeal and Reply Brief.

For the above reasons as well as those presented in the Brief on Appeal filed September 10, 2003, the Honorable Board is respectfully urged to reverse the rejections of the Primary Examiner and to remand the application to the Examiner with instructions to allow claims 1-4, 6, 9, and 11-15 under appeal.

Respectfully submitted,

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For Applicants

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FDP/tk

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